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- (71) Applicant (*for all designated States except US*): KEMIRA PIGMENTS OY [FI/FI]; Porkkalankatu 3, FIN-00180 Helsinki (FI).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): KARVINEN, Salla [FI/FI]; Kuusamantie 37, FIN-28660 Pori (FI). LAMMIN-MÄKI, Ralf-Johan [FI/FI]; Pajatie 5, FIN-28450 Ulvila (FI).
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(54) Title: A PHOTOCATALYST CONTAINING TITANIUM OXIDE, THE PRODUCTION METHOD AND USE OF THE SAME

(57) Abstract: The invention relates to a photocatalyst containing titanium dioxide, to a method for using it and to its application. A sulphurous titanium dioxide hydrate precipitate is precipitated from an acid titanium oxysulphate solution at a temperature below the boiling point of the solution, e.g. in the range from 70 to 100°C, using crystal nuclei and without addition of base. The precipitate is separated, washed and calcinated. The photocatalytic titanium dioxide thus obtained has a specific area in the range from 100 to 250 m<sup>2</sup>/g and a 0.3 to 5% sulphur concentration. Catalytic activity has been confirmed in acetaldehyde decomposition and in anionic (SNC<sup>-</sup>)<sub>2</sub> radical formation.

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